

incompletely modified foliage-pinnules is not uncommon in *Osmunda regalis*. The fruiting-pinnules end in several simple or divided thread-like filaments. The fruit appears to consist of *exannulate Marattiaceous sporangia*.

Another interesting point was observed on some of the specimens in the collection of the Geological Survey of Ireland. This had evidently been noticed by Mr. Baily, though its importance was not fully appreciated, and is referred to by him as a rounded expansion of the base of the stem, which apparently separated into scales. Mr. Carruthers, evidently referring to the same structure, says "The stipes were thick, of considerable length, and clothed with large scales, which formed a dense covering at the enlarged base" \*.

The structures here alluded to are two large *stipules*, one on each side of the base of the rachis, and on some of the specimens in the collection of the Geological Survey of Ireland they are admirably shown. What has given rise to the statement that the base of the stipe was "clothed with large scales" is evidently the remains of large pinnules which are situated on the main rachis between the pinnae, and are continued to almost the extreme basal termination of the rachis. Such pinnules, obliquely imbedded in the matrix and broken over, have been mistaken for scales. So far as my observations have gone, the rachis is entirely destitute of membranous scales.

The presence of the *stipules* at the base of the rachis of *Archæopteris hibernica*, altogether independently of the evidence afforded by the fruit, points strongly to its affinities being with the Marattiaceæ; and when to this is added the *Marattiaceous* structure of the fruit itself, there does not remain the slightest doubt in my mind that the true position of *Archæopteris hibernica* is in the Marattiaceæ.

In conclusion, I have to express my thanks to Dr. A. Geikie and Prof. Ball for all the facilities they kindly gave me for examining the specimens in the respective collections of the Geological Survey of Ireland and in the Science and Art Museum, Dublin.

LV.—*A List of Batrachians from the Province Santa Catharina, Brazil.* By G. A. BOULENGER.

Two rather extensive collections of Frogs, formed in the Sierra do Catharina by Hr. Michaëlis, which I have recently

\* Carruthers, *l. c.*

examined, afford information as to the little-known Batrachian fauna of the Province Santa Catharina. The principal interest resides in the comparison with the fauna of the contiguous province of Rio Grande do Sul, now fairly known, thanks to the exertions of Hensel, von Ihering, and Bischoff. It will be seen from the following list that the range of several forms recently discovered in the latter province extends to Santa Catharina.

1. *Engystoma ovale*, var. *bicolor*, Val.

2. *Engystoma leucostictum*, sp. n.

Snout obtuse, feebly projecting, not twice as long as the diameter of the eye. Fore limb much longer than its distance from the end of the snout. The tibio-tarsal articulation reaches the shoulder, the tarso-metatarsal the eye. Toes obtuse, with a rudiment of web; a single, very small, roundish, metatarsal tubercle. Dark brown above, with scattered, minute, white dots; limbs marbled with pink above; a fine interrupted white line along the hinder side of the thighs; lower surfaces white, spotted and marbled with dark brown.

From snout to vent 25 millim.

A single female specimen.

3. *Pseudis mantidactyla*, Cope.

4. *Elosia nasus*, Licht.

5. *Hylodes Gollmeri*, Ptrs. (*Guentheri*, Stdr.).

6. *Ceratophrys Boiei*, Wied.

7. *Paludicola Olfersii*, Mart.

8. *Paludicola biligonigera*, Cope.

9. *Leptodactylus Gaudichaudii*, D. & B.

10. *Eupemphix nana*, Blgr.

11. *Bufo arenarum*, Hens.

12. *Hyla faber*, Wied.

13. *Hyla marginata*, Blgr.

14. *Hyla pulchella*, D. & B.

15. *Hyla Bischoffii*, Blgr.16. *Hyla bivittata*, Blgr.17. *Hyla nasica*, Cope.18. *Hyla senicula*, Burm.19. *Hyla catharinæ*, sp. n.

Tongue circular, very slightly nicked and free behind. Vomerine teeth in two transverse groups close together between the rather large choanæ. Head much depressed, as long as broad; snout rounded, as long as the diameter of the orbit; canthus rostralis rather indistinct, curved; loreal region concave; interorbital space as broad as the upper eyelid; tympanum very distinct, half the diameter of the eye. An indistinct rudiment of web between the outer fingers; no projecting rudiment of pollex; toes two thirds webbed; disks smaller than the tympanum; subarticular tubercles moderate; no tarsal fold. The tibio-tarsal articulation reaches between the eye and the tip of the snout. Upper surfaces slightly warty; belly and lower surface of thighs granulate; no fold across the chest. Greyish or brown above, with symmetrical darker bands and marblings; a large, triangular, dark spot between the eyes, light-edged anteriorly; a  $\Lambda$ -shaped band on the sacral region; limbs with dark cross bands; groin white (in spirit), with black marblings; concealed surfaces of hind limbs barred black and white; lower surfaces whitish, with small blackish spots.

From snout to vent 42 millim.

Two female specimens.

20. *Hyla aurantiaca*, Daud.21. *Phyllomedusa Iheringii*, Blgr.

LVI.—On *Butterflies of the Genus Teracolus obtained by Mr. H. G. Palliser at Khandesh in the Winter of 1886-7*.  
By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

AMONGST the butterflies collected by Mr. Palliser in the Khandesh district of Bombay, the species of *Teracolus* are the most interesting; and as this gentleman has very generously presented such as we required, including a unique